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**Roadranger**  
SUPPORT

**Subject:** UltraShift *PLUS* Shift Bar Housing Update

**Document Number:** TAIB-0884

**Updated:** August 15, 2022

**Date:** August 24, 2020

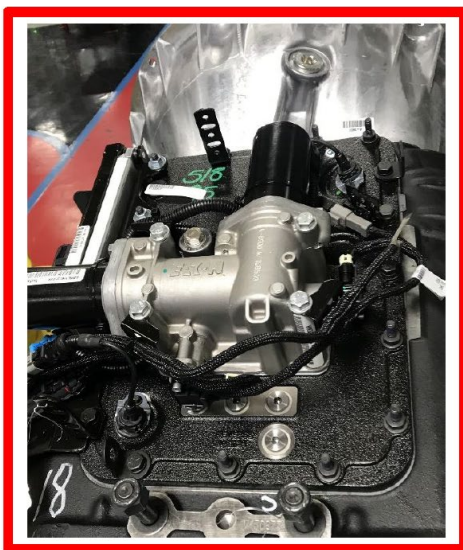
### Issue Description:

Eaton Cummins Automated Transmission Technologies has changed the shift bar housing (SBH) material from cast iron to die cast aluminum on the UltraShift® *PLUS* family of automated manual transmissions. This change is identified by part number, material type and weight.

With this change the SBH to main case sealing method has also changed from a gasket to Loctite® 5810F sealant. Modifications have been made to the main case mating surface to promote sealant adhesion and overflow capture.

### Change Summary:

- **Die cast aluminum shift bar housing changes include:**
  - New part numbers: 4308880 and 4309024.
  - Reduced weight by 18.25 lbs. from the cast iron SBH.
  - Various casting and machining changes to maintain component stack-up (speed sensor depths and shift yoke clearances).
  - Loctite 5810F sealing method replaces SBH gasket.



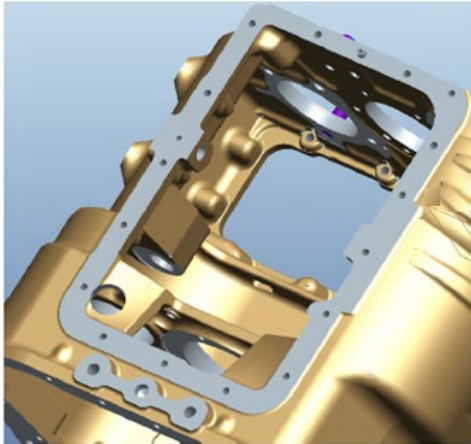
Cast Iron painted black



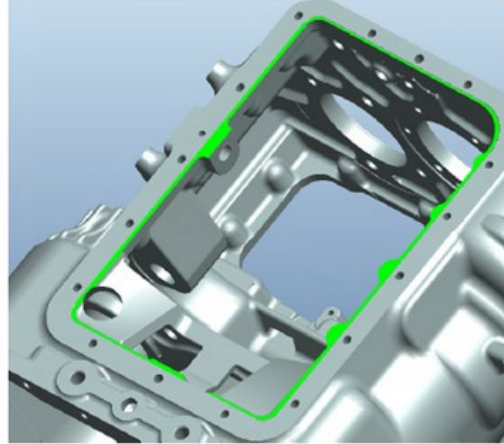
HPDC Aluminum

- **Main case changes include:**

- Nine new part numbers
- SBH mating surface finish machining specification widened to promote sealant adhesion.
- SBH mating surface secondary inner perimeter machining cut added for sealant overflow capture.
- Machining of 6 and 8-bolt PTO mounting surfaces was included to allow sealant to be used for sealing, however a gasket may still be used.



Main case without RTV capture area



Main case with RTV capture area shown in green

**Affected Models/Population:**

UltraShift *PLUS* MXP, VXP, MHP, VCS and VMS models

**Field Service Strategy:**

The UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) has been updated to include the aluminum SBH removal and installation procedures. Letters of instruction (L-Letter) are included in all associated service part kits. Aluminum SBH sealant is Loctite 5810F.

**Frequently Asked Questions:**

- How do I know which SBH, cast iron or aluminum, is used with my main case?
  - All transmission bill-of-materials have been updated.
  - The Inforanger parts website has been updated with the new parts and kits.
  - Letters of instruction (L-Letters) the changes are included with all new parts and kits.
  - UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) has been updated to include aluminum SBH removal and installation procedures.

## Service Bulletin – Product

- Are the internal parts of the aluminum SBH assembly the same parts used in the cast iron SBH assembly (rails, yokes, interlock, shift blocks, etc.)?
  - Yes, there have been no changes to the internal SBH components.
- Are there any changes to SBH component stack-up (speed sensor depths and shift yoke clearances)?
  - No, the new SBH design has addressed these concerns.
- Can an aluminum SBH be used on an old main case originally built with a cast iron SBH?
  - Yes, the aluminum SBH is backwards compatible however sealing with Loctite 5810F is required.
- If an aluminum SBH is used on a main case that was originally built with a cast iron SBH what sealing method is required?
  - Loctite 5810F sealant is required.
- Can a cast iron SBH be used on a main case designed for an aluminum SBH?
  - No, a new aluminum SBH must be used to achieve a positive seal with the newly designed main case.
- Can gaskets still be used at the PTO covers on a newly designed main case?

Yes, Loctite 5810F sealant is preferred but a gasket may be used.

### Warranty Information

Failure to successfully complete the removal and installation procedures outlined in the UltraShift *PLUS* Automated Transmissions Service Manual (TRSM0940) may result in a shift bar housing to main case oil leak and would not be a warrantable failure.

The material contained in this bulletin is product improvement information. Eaton is not committed to, or liable for, canvassing existing products. FSUD: 2020-FSUD-4196